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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/731,904 | 12/08/2000 | Koichiro Kishima | SON-2029 | 1187 |

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WASHINGTON, DC 20036

EXAMINER

FERGUSON, LAWRENCE D

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1774

DATE MAILED: 04/02/2002

5

Please find below and/or attached an Office communication concerning this application or proceeding.

T-D-5

Office Action Summary

Application No.

09/731,904

Applicant(s)

KISHIMA ET AL.

Examiner

Lawrence D Ferguson

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 19-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-18, drawn to optical recording medium, classified in class 428, subclass 64.4.
 - II. Claims 19-34, drawn to method of manufacturing optical recording medium, classified in class 264, subclass 478.
2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product can be made by forming an extruded film layer on the surface of the optical recording medium.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Ronald Kananen on January 29, 2002, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-18. Affirmation of this election must be made by applicant in replying to this Office action. Claims 19-34, withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections – 35 USC 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. In Claims 1, 3-6, 8-12 and 14-16, the term "flattenable" is vague and indefinite. Flattenable offers no positive claim limitation. It is unclear whether Applicant is saying the article is flat or Applicant is saying the article has the ability of being flat.

b. In Claim 9, "The optical recording medium according to claim 1, wherein the thickness of the light transmission flattenable film is made to be equal to or smaller than the thickness of the light transmission flattenable film" is indefinite. It appears Applicant is claiming the light transmission flattenable film is compared to itself. Clarification is required.

c. In Claim 12, "high level of flatness" is indefinite. High is a relative term and is therefore indefinite.

Claim Rejections – 35 USC § 103(a)

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-4 and 6-17 are rejected under 35 U.S.C. 103(a) as being obvious over Kawakubo et al. (U.S. 5,972,459) in view of Yamada et al (U.S. 5,635,267).

10. Kawakubo discloses an optical recording medium with a reflective film, a phase-change recording layer and a light transmissive layer (abstract and column 2, lines 18-28). Kawakubo discloses forming the film layer by sputtering (column 3, lines 1-2) and the recording medium is for recording and/or reproducing (column 3, lines 65-66).

Kawakubo discloses the structure is irradiated with laser light (column 7, lines 18-19) with the recording medium comprising a convex portion, concave portion and flat portion (column 7, lines 25-29). Kawakubo discloses a dielectric layer formed on the substrate (column 8, lines 43-46) with the film comprised of inorganic material such as ZnS and SiO₂ (column 8, lines 48-52). The optical recording medium having protrusions eliminated that damage an optical system disposed in the proximity of and in opposition to the surface of the light recording medium and performs the irradiation of light is a

product by process. Additionally, the formation temperature is a product by process claimed limitation as well. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966. Kawakubo does not disclose the film thickness. Thickness is an optimizable feature that is not result effective. It would have been obvious to one of ordinary skill in the art to optimize the components because discovering an optimum or workable range is of routine skill in the art. Kawakubo does not disclose spin-coating or changing from an amorphous state to a crystalline state.

Yamada teaches a recording medium with a recording layer having a concavo-convex surface (abstract) where a laser beam irradiates a recording medium (column 5, lines 58-60). Yamada teaches a polishing process of the recording medium produced by spin coating (column 10, lines 60-65) and has reversible phase-changing between the amorphous and crystalline states (column 12, lines 14-18). Kawakubo and Yamada are analogous art because they are from the same field of information recording mediums. It would have been obvious to one of ordinary skill in the art to include the polishing process and spin-coating features in the recording medium of Kawakubo because Yamada teaches the polishing helps smooth out the surface from unevenness and the spin coating helps protect the information recording medium from environmental

hazards. It would have also been obvious to one ordinary skill in the art to include the recording layer phase change material changing from an amorphous state to a crystalline state because Yamada teaches this is conventional within the art. Neither reference explicitly teaches hardness. Because the references have the same components with the same function as the claimed invention, it would have been obvious to have a hardness, absent any evidence to the contrary.

Claim Rejections – 35 USC § 103(a)

11. Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being obvious over Kawakubo et al. (U.S. 5,972,459) in view of Yamada et al (U.S. 5,635,267) further in view of Sekiya et al (U.S. 5,614,287).

12. Kawakubo in view of Yamada are relied upon for claims 1-4 and 6-17. Kawakubo does not disclose the substrate made out of organic material or magnetic material. Sekiya teaches an optical recording medium with a recording layer, convex or concave configuration formed on the substrate (abstract) where the substrate is made of organic material (column 2, lines 21-25). Sekiya teaches the optical recording medium being magnetic. All of the references are analogous art because they are from the same field of recording media. It would have been obvious to include the organic material in the substrate of the recording medium of Kawakubo because the organic material increases the recording quality of the optical recording medium. Although none of the references teach the state of magnetization changed by the irradiation of light, this is a product by

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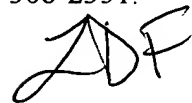
process claimed limitation. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is (703) 305-9978. The examiner can normally be reached on Monday through Friday 8:30 AM – 4:30PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. Please allow the examiner twenty-four hours to return your call.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)

308-2351.



Lawrence D. Ferguson
Examiner
Art Unit 1774

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1760